12-20-04 AF/1772

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of W. BAKKER, et al.	)	Examiner: W. WATKINS III
	)	Art Unit: 1772
Serial No.: 08/977,374	)	
	)	Confirmation: 3062
Filed: November 24, 1997	)	
DEVICE FOR HEAT SHRINKING FILM ONTO AN OPEN-TOPPED CONTAINER	)	
Attorney Docket No.: PZNZ 2 00017-1	)	Cleveland, OH 44114 December 17, 2004

Mail Stop Appeal Brief- Patents
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Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & MCKEE, LLP

Date: December 17, 2004

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPEAL BRIEF UNDER 37 C.F.R. § 1.41

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Dear Sir:

On October 20, 2004, Appellant filed a Notice of Appeal from the rejection of claims 36-46 in the Office Action of May 18, 2004. What follows is Appellant's Appeal Brief (submitted in triplicate) in accordance with 37 C.F.R. 1.41.

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is the inventor William J. Bakker, named in the caption of this brief.

II. RELATED APPEALS AND INTERFERENCES

Appellant withdrew the Appeal in the parent application. No decision was rendered by the Board. There are no other appeals and/or interferences.

II. STATUS OF CLAIMS

Claims 36-46 are on appeal.

Claims 36-46 are pending.

Claims 36-46 are rejected.

Claims 1-35 are canceled.

IV. STATUS OF AMENDMENTS

The Amendment of February 12, 2004 was entered. No Amendment after the May 18, 2004 Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 36 is directed to a cover for sealing an open-topped container **12** (page 4, lines 11-12, Figs. 5-8). The cover includes a piece **102** of heat shrinkable film **26** (Figs. 5 and 8; page 4, line 34-page 5, line 8). The piece of heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy (page 12, lines 16-28). The radiant energy, as noted in the specification at page 9, lines 32-36, may be provided by a tungsten halogen lamp which produces energy in the infrared. The film is shaped and sized to cover the open top **13** of the container and to have a downwardly extending portion **103** around an upper rim of the container (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). The downwardly extending portion **103** includes a means which converts the radiant energy to heat to heat the downward depending portion when the means is exposed to the radiant energy (page 12, lines 29-32, page 13, lines 2-5). The converting means, as described in the specification, may include adapting the film to absorb energy by the film being made from a tinted material or by being coated with an energy

absorbent coating, for example, by printing (page 12, line 29-page 13, line 5). The downwardly extending portion is thereby heat shrunk around the container rim to form a spill resistant cover upon exposure to the radiant energy (page 8, lines 32-36; page 12, line 29-page 13, line 5).

As will be appreciated, those portions of the cover which lack the radiation to heat converting means are unchanged upon exposure of the cover to the radiant energy. This enables a selective shrinking of the downward depending portion where it is heated by the converting means, while enabling the portion of the cover covering the container top to be substantially unaffected. The cover thus enables the container to be sealed without substantial build up of heat in the container and thus minimizes potential damage to the contents therein caused by heating. The cover also avoids the need for shielding the top of the container from a heat source during the sealing step.

Claim 41 is directed to a roll of heat shrinkable film **22** (page 4, lines 22-23; Fig. 5) for use in a device for forming spill resistant covers on open-topped containers **12**. The roll includes plurality of severable pieces **102** of heat shrinkable film formed in a continuous web (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). Each piece is shaped and sized to cover the open top **13** of the container and to have a downwardly extending portion **103** around an upper rim of said container (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). The heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy (page 4, line 34-page 5, line 8; page 12, lines 16-28). The downwardly extending portion is adapted to include a first means to absorb the radiant energy to transfer heat to said downwardly extending portion upon the first means being exposed to the radiant energy. The first means, as described in the specification, may include the film being adapted to absorb energy, for example, by the making the film from a tinted material or by coating the film with an energy absorbent coating, for example, by printing (page 12, line 29-page 13, line 5). The downwardly extending portion is heat shrunk onto the container to form a spill resistant cover upon exposure to the radiant energy source (page 12, lines 16-18 and 29-32).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1. Claims 36, 37, 38, and 41 are rejected as being obvious under 35 U.S.C. §103(a) over Heilman, et al. (Australia 27,337) in view of Amberg, et al. (U.S. Patent No. 3,955,699) and further in view of Applicants' alleged admissions in the Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph, in the Reply Brief filed August 2000, page 2, sixth paragraph, beginning "Once again," and in the Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6.

2. Claims 39-40 and 42-46 are rejected as being obvious under 35 U.S.C. §103(a) over Heilman, et al. (Australia 27,337) in view of Amberg, et al. (U.S. Patent No. 3,955,699) and further in view of Applicants' alleged admissions in the Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph, in the Reply Brief filed August 2000, page 2, sixth paragraph, beginning "Once again," and in the Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6, and further in view of Anderson, et al. (U.S. Patent No. 5,113,479).

VII. ARGUMENT

A. Claims 36-46 Are Patentable Over The References Of Record

1. Claims 36, 37, 38 Are Patentable over Heilman, et al. in View of Amberg, et al. and Further in View of Applicant's Alleged Admission

The **Heilman** (AU 27 337) patent discloses a heat shrinkable, plastic film. When the film is subjected to heat of any type, it will shrink (page 2, first paragraph). As illustrated in FIGURE 1, the film **10** is advanced beyond a severing means **31** where it is cut (page 7, second paragraph). The cut film is positioned above a container **16** (page 9, first paragraph). A shield **44** shields the central area of the film while leaving the edges of the film exposed to blasts of hot air or steam or to heat caused by high frequency electricity, electrical resistance, infrared heat or other heat supplied to a circular heating ring **40** or directly to the film (page 9, third paragraph). The skirt edge is exposed to the heat from any source and shrunk onto the container (page 9, fourth paragraph). The shield **44** is required to be pressed tightly against the container rim before the film covered container enters the heating area, to thereby shield and restrain the entire area within the mouth of the container when the film edges are being heated, otherwise no seal will result. The element **44** thus functions

as both a clamp and a shield (page 10, second paragraph). The container is then lowered and the central area of the film optionally is shrunk (page 9, fourth paragraph, page 10, second paragraph).

Thus, Heilman makes no suggestion of configuring the skirt portion of the film of material which is in anyway different from the central portion. To the contrary, Heilman teaches against such a concept by requiring the use of a shield to shield the central portion from the heat applied to the skirt. When the container of Heilman is lowered, it passes by the heater ring causing the top to shrink because the same heater ring mechanism shrinks both the skirt and the top; it is therefore essential that both be configured of like material. There is no suggestion that the skirt should be configured of material which converts radiant energy into heat.

The Examiner asserts that Applicant's Amendment of February 17, 2004, and Appeal Brief filed April 7, 2000, and supplemented on May 9, 2000, are an admission that "the film substrate of Heilman, et al. remains unchanged upon exposure to radiant energy, as is instantly claimed." (Office Action of May 18, 2004, page 3, second paragraph). The Applicants' amendment of February 17, 2004, states, in part:

> **Claim 36** calls for a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The Heilman film contracts when heated. **However, it does not state whether or not it also contracts in response to infrared light**. The ultimate and antiultimate lines of paragraph 3 of page 10 suggest that Heilman's film likely contracts when exposed to either heat or infrared light, but it's not clear. **In any case, Heilman does not suggest that the film should remain unchanged upon exposure to infrared light.**

(page 10 of Amendment filed February 12, 2004; emphasis added). The amendment thus cannot be construed as an admission that the film substrate of Heilman, et al. remains unchanged upon exposure to radiant energy. Rather, it is understood that Heilman is not sufficiently clear for one of ordinary skill in the art to gain a teaching which would render the presently claimed invention obvious.

Amberg (U.S. 3,955,699) discloses a container lid **11** for a container **12** formed of a thermoplastic material (col. 2, line 61-col. 3, line 1). The closure **11** is of a two-piece construction, the pieces comprising a disc-like central panel **14**, which substantially spans the mouth of the container, and an annular skirt **15** (col. 3, lines

17-20). The central portion is formed from a sheet-like material, such as paperboard or plastic (col. 3, lines 28-33). The skirt is formed of a rectangular strip of thermoplastic material which is wound into a cylinder, and heat sealed to join the edges together (col. 3, lines 62-66). The cylinder is then inserted over a mandrel having an external surface with a configuration which is the internal surface of the skirt as it appears in FIGURE 1 (col. 3, lines 63-col 4, line 3). The strip is then exposed to heat while it is on the mandrel to cause it to shrink to the shape of the mandrel (col. 4, lines 3-6). The central panel **14** is joined to the skirt is either before or after the skirt is removed from the mandrel (col. 4, lines 6-8). Once the lid is positioned on a cup, the skirt, which is opaque to infrared radiation, is shrunk by the application of infrared radiant energy (col. 4, lines 44-50).

Thus, the skirt **15** of Amberg is a different construction which, during the manufacture of the lid, is bonded to the central panel **14**. There is no suggestion of forming the lid of Amberg from a sheet. Further, Amberg makes no suggestion that the central panel **14** be a shrinkable material which is shrinkable either by heat.

In another embodiment, shown in Figure 5 of Amberg, a central panel **114** is formed from a sheet of thermoplastic material. The closure also includes a heat-shrinkable skirt piece **115**, which is similar to skirt piece **15,** except for lacking the vertical sections **17b** and **17c** (Fig. 5, col. 5, lines 30-42).

In both embodiments, the skirt **15** is formed with an overlapped portion or free end **25** which serves as a graspable tab by which the closure skirt may be readily unwound and torn from the central panel **14, 114** when it is desired to open the container (col. 5, lines 18-29). Thus, Amberg suggests that the closure should be made of multiple materials including a circumferentially wrapped strip which forms the skirt **15, 115** and is lapped to form a pull tap **25.**

The Examiner takes the position that it would have been obvious to one of ordinary skill in the art to join an opaque heat shrinkable thermoplastic material to the downwardly extending edge portion of Heilman, et al. or make the downwardly extending portion of an opaque heat shrinkable thermoplastic material to directly absorb infrared radiation and use only a limited number of lamps, as taught by Amberg, et al. (Office Action of May 18, 2004, page 4, note 3).

For the reasons outlined below, Appellant respectfully traverses.

a. Combining Amberg with Heilman Does not Result in the Claimed Cover

The combination of Amberg with Heilman does not arrive at the presently claimed invention. Claim 36 recites a piece of heat shrinkable film shaped and sized to cover the open top of a container and to have a downwardly extending portion.

The combination of Amberg's skirt **15** with Heilman's top would yield a two piece, three dimensional construction, not a piece of heat shrinkable film. Amberg's skirt is required to be three dimensional, in order that the closure is stackable (col. 3, lines 34-48).

The Examiner asserts that it would have been obvious to "join an opaque heat shrinkable thermoplastic material to the downwardly extending edge portion of Heilman." (Office Action of May 18, 2004, page 4, bottom of the page). However, this is contrary to the teachings of the references. There is no suggestion, in either reference, that Amberg's skirt material be attached as a two dimensional sheet to a sheet material. Rather, at the very least, Amberg calls for a strip that is formed into a cylindrical shape before attachment to the top of Amberg.

Moreover, the Examiner has not shown how one of ordinary skill in the art could incorporate Amberg's skirt material into the film of Heilman while retaining Heilman's film. Nor has the Examiner shown how one of ordinary skill in the art would incorporate the alleged properties of Amberg's skirt into the film of Heilman to achieve the presently claimed cover.

b. Amberg Teaches Away from the Claimed Invention

Claim 36 calls for the piece of film to be a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The skirt **15** of Amberg deforms when heated, as is evident from being shaped on a heated mandrel, and also shrinks when irradiated with infrared energy from bulbs **21**. Thus, Amberg clearly teaches away from a downwardly extending portion of a film which remains unchanged upon exposure to radiant energy but yet which includes a means to convert radiant energy to heat.

c. Combining Amberg with Heilman Defeats the Objects of Heilman

The Examiner argues that "modification of Heilman, et al. does not destroy the function of Heilman, et al." Appellant respectfully traverses.

One problem Heilman seeks to overcome is to provide a process for heat sealing containers in an automated process with film from a roll (page 3, third paragraph). Adding the preshaped skirts of Amberg would prevent the material from being dispensed in roll form, requiring instead that each top be individually preformed, a complex and expensive process.

Another problem Heilman seeks to solve is preventing the top portion of a film from being heated until the skirt has been sealed to the container (page 2, first and second paragraphs). This is achieved in Heilman by covering the top portion during heating of the skirt and then removing the shield to allow the top to be heated. If Amberg's skirt were to be combined with Heilman's film, and heat used to shrink the skirt, the top portion would still need to be covered while the skirt is heated. Assuming, arguendo, that the top of Heilman were to be formed from a film which remains unchanged upon exposure to infrared light, as the Examiner suggests, and that infrared radiation, rather than heat were to be applied, combining Amberg with Heilman would prevent the top of Heilman from being shrunk in a second step.

Further, in using a film, Heilman seeks to provide a method by which the film can be restrained during sealing. Heilman requires the shield **44** to be present and pressed tightly against the container rim before the film-covered container enters the heating area, to restrain the film. The shield **44** thus functions as a clamp (page 10, second paragraph). Thus, even if the skirt of Amberg removed the need for a shield to prevent the top of Heilman from shrinking during sealing of the skirt, there is no suggestion in either reference as to how the shield could be eliminated and the top restrained, other than by using a three dimensional skirt, which, once again, would defeat the first objective, discussed above. Thus, combining Amberg's skirt with Heilman's top adds complexity to Heilmans's structure without providing a recognizable benefit.

Thus, the combination of Amberg with Heilman defeats the objectives of Heilman.

d. <u>There is no Motivation in Amberg or Heilman for the Presently Claimed Cover</u>

Neither reference teaches or fairly suggests the selective and sequential use of <u>two</u> different methods of shrinking a film onto a container. Without the realization that one method of shrinking (infrared radiation) can be used for the skirt, while

another method (direct heat) can be used when it is desired to shrink the top, there is no motivation for providing materials for a top and skirt which respond differently to infrared radiation and direct heat. Heilman shrinks both the skirt and the top with the same heat source. Thus, to operate in its current and intended manner, all portions of the Heilman material would need to be treated the same. Having a skirt responding differently to the top would serve no purpose in Heilman.

The Examiner suggest that "using direct infrared radiation with an opaque material is taught (by Amberg) as being advantageous because only a few IR lamps are needed for this direct exposure (col. 4, lines 45-50)." However, the Examiner has not provided any motivation for providing a skirt which is different from the top of Heilman. Rather, the Examiner's argument would provide motivation for replacing Heilman's entire film (assuming arguendo, as the Examiner suggests, Heilman's film remains unchanged upon exposure to radiant energy) with Amberg's skirt material.

Accordingly, Appellant requests that the Board reverses the rejection of claim 36, and claims 37-38 dependent therefrom over the combination of Heilman with Amberg.

2. Claims 39-40 Are Patentable over the Combination of Heilman, Amberg, and Anderson, and Applicant's Alleged Admissions

The **Anderson** patent (US 5,113,479) discloses a method of infrared heating a restricted area on a continuous thermoplastic laminated web. The laminate consists of a paper or cardboard layer which is laminated on both sides with a thermoplastic (col. 1, lines 20-23). The laminate may also include an aluminum foil. To protect the laminate while it is formed into a tube, a narrow edge of thermoplastic is allowed to project out beyond the laterally defining line of the laminate (col. 1, lines 29-37). This strip is later folded over and sealed against the laminate surface of thermoplastic (col. 1, lines 38-42). As shown in FIGURE 1, an IR lamp **1,** fitted with a reflector **2** is positioned to concentrate radiation on a restricted area **7** of the paper and plastic laminate **4** (col. 2, lines 31-42). The restricted area is adjacent the thermoplastic edge **5**, which remains unheated (col. 2, lines 61-62). As shown in FIGURE 2, the area **7** of the laminate, to which the radiation is restricted, is preprinted with a colored strip **6,** which absorbs heat from the IR lamp (col., 3, lines 11-14). In this manner, the colored strip concentrates the heating of the layer **4** in the area where the thermoplastic material on its opposite surface is to be melted.

Thus, Anderson teaches away from heating a downwardly extending portion of a piece of heat shrinkable film. Rather, Anderson teaches restricting IR radiation to a restricted area **7** of the laminate spaced from the edge **5**. The laminate does not shrink on heating. Heating the strip **6** of Anderson does not cause shrinkage of the thermoplastic layer of the laminate, only melting. Moreover, over-hanging portion **5** of Anderson, which is most analogous to the skirt of the base reference, is not caused to shrink upon exposing the strip **6** of Anderson to infrared radiation. Quite to the contrary, Anderson specifically teaches that edge **5** should be protected from heating.

The Examiner asserts that it would have been obvious to make the downwardly extending portion of the film of Heilman, et al. better able to absorb IR radiation by the use of dark printing ink in order to reduce energy consumption because of the teachings of Anderson.

For the reasons outlined below, Appellant respectfully traverses.

a. Anderson Does not Cure the Deficiencies of the Primary References

The arguments regarding the combination of Heilman with Amberg and Applicants' alleged admissions in section 1 above are reiterated. Anderson does not cure the shortcomings of Heilman and Amberg with respect to the non-obviousness of combining these references. The thermoplastic layer of Anderson's laminate **4** softens when heated. Anderson does not teach or fairly suggest that the thermoplastic layer should shrink under either heat or infrared energy. Moreover, the fact that Anderson uses a reflector **2** to prevent the infrared light from reaching the exposed portion **5** of the thermoplastic edge suggests that the thermoplastic film is adversely affected by infrared light and that it in some way changes a physical property. Thus, none of the references teach or fairly suggest a heat shrinkable film substrate which contracts when heated but which remains unchanged upon exposure to radiant energy.

b. The Combination of Anderson with Heilman and Amberg Does not Teach a Coating on a Film, the Coating Being Adapted to Absorb Radiant Energy

Anderson teaches softening restricted area **7** of a layer of a multilayer laminate **4** that has been printed with a black strip **6** with IR radiation. There is no suggestion in Anderson of using IR radiation to shrink a film by use of the strip **6**. Thus, the

infrared light is focused by the reflectors on the non-thermoplastic material and blocked from directly irradiating the exposed thermoplastic material along edge **5**.

The strip of thermoplastic material is heated to soften it, not to shrink it. Indeed, it is submitted that shrinkage would cause cracking and creasing of the paper and aluminum layers - - something which Anderson expressly teaches should be avoided. The softened strip facilitates folding over the edge, which edge should be unheated to remain manageable (col. 2, l. lines 61-68).

c. Anderson Does not Teach a Film Substrate which Remains Unchanged when Exposed to Radiant Energy

Anderson requires that a reflector **2** to direct the radiation from IR lamps on a restricted area so that the edge **5** is not physically affected (col. 2, lines 61-63). This does not suggest a substrate which remains unchanged when exposed to radiant energy, but rather suggests the opposite.

d. Anderson Is Unrelated Art

A critical difference in Anderson is that Anderson does not concern transparent shrink wrap technology at all. Anderson is concerned with melting (as opposed to shrinking which would cause cracking and crinkling) a thermoplastic laminate on a packaging material at specified locations to enable welding of the packaging material. The colored markings are optional in Anderson as the entire laminated material is opaque and thus able to generate heat when supplied with radiant energy. None of the problems associated with shrink wrap technology are addressed by Anderson as Anderson is concerned with an entirely different problem. Anderson limits the exposure area of the infrared radiation which converts radiant energy to heat. Appellant has done exactly the opposite. Appellant has increased the area of a transparent shrink wrap film which converts radiant energy to heat energy. This is clearly neither taught nor suggested by Anderson, either alone or in combination with Heilman and/or Amberg.

e. The Combination of Anderson with Heilman Defeats the Objects of Heilman

Heilman desires to heat seal a skirt prior to sealing a cover. Thus, even if the skirt of Heilman were to be made opaque like Anderson's strip and the top unchanged to infrared light, as the Examiner proposes, this would prevent Heilman's top from

being shrunk in the second step. Thus, there is no motivation to combine Anderson with Heiman and Amberg.

f. The Combination of Anderson with Heilman and Amberg Does not Suggest the Claimed Structure

The Examiner argues that "the whole structure of Amberg, et al. does not have to bodily be incorporated with Heilman to make the extending portion of Heilman opaque" (Office Action of May 18, 2004, page 10). However, the Examiner has not shown how one of ordinary skill in the art would incorporate Amberg's skirt into Heilman's top without incorporating the entire structure.

Thus, Appellant respectfully submits that the Examiner has failed to provide any motivation to combine the teachings of the cited art. The Examiner has failed to consider the teaching of the references as a whole, but rather has elected to pick and choose selected portions of the cited art and merely combine the unrelated art using the present disclosure as a motivation to do so.

Accordingly, it is submitted that claim 39, and claim 40 dependent therefrom, distinguish patentable over the combination of Heilman with Amberg and Anderson.

3. Claims 41, 44, and 46 are Patentable over the Combination of Heilman, et al. in View of Amberg, et al. and Applicant's Alleged Admissions

a. The Combination of Amberg with Heilman Does not Suggest the Present Invention

Claim 41 is directed to a roll of heat shrinkable film. The heat shrinkable film is a substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The film of Heilman does shrink when heated, but there is no suggestion that it should remain unchanged upon exposure to radiant energy. Amberg is not directed to a roll of a heat shrinkable film in the sense of claim 41. The "roll" of thermoplastic material is wound around a mandrel and lapped to define a pull tab **25**. The thermoplastic material is heat shrunk onto the mandrel, after which the center panel **14, 114** is attached. Further, the skirt of Amberg is thermally formed from one material and bonded to a center panel **14**. Thus, the Amberg construction is not a roll of heat shrinkable film, rather a series of individual, stackable, closures.

Even if, as the Examiner suggests, Heilman does teach a film which remains unchanged when exposed to radiant energy, the combination of Amberg with Heilman

does not teach a roll of heat shrinkable film, but rather teaches a three-dimensional structure.

Requiring a three dimensional structure would also destroy the invention of Heilman, which is to allow a film to be used for forming covers. Thus, there is no motivation for the combination of Heilman with Amberg.

Accordingly, Appellant requests that the Board reverses the rejection of claim 41 and claims 44 and 46 dependent therefrom over the combination of Heilman with Amberg, in view of Applicant's alleged admisssions.

4. Claims 42-43 and 45 Are Patentable over the Combination of Heilman with Amberg and Anderson

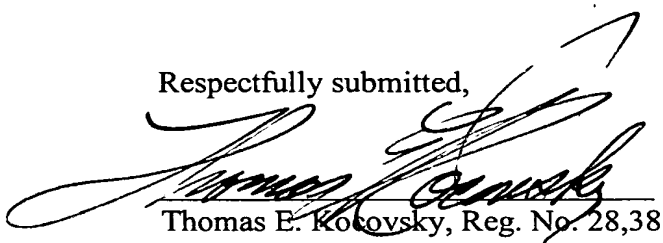
Heilman and Amberg both look to contract the edge or skirt portion of the closure. By contrast, a central focus of the Anderson patent is to avoid heating or irradiating the edge region **5** with infrared radiation. It is with this avoidance of heating and altering the properties of the edge **5** in mind that Anderson suggests putting a dark strip on the aluminum foil or other material of the web to concentrate the heating away from the edge **5**. Because the strip **6** of Anderson is designed and used to avoid heating the edge **5**, it is submitted that Anderson provides no motivation to modify the skirts of Heilman or Amberg to enhance heating and shrinkage or other changes in the physical property of their edge or skirt region.

Accordingly, Appellant requests that the Board reverses the rejection of claims 42-43 and 45 over the combination of Heilman with Amberg and Anderson.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that claims 36-46 distinguish over the cited references and that the other than the obviousness-type double patenting rejections, are in condition for allowance. For all of the above reasons, Appellant respectfully requests this Honorable Board to reverse the rejections of claims 36-46.

Respectfully submitted,



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Filed: December 15, 2004

CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

36. A cover for sealing an open-topped container comprising:

a piece of heat shrinkable film shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container, said piece of heat shrinkable film being a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy, said downwardly extending portion including a first means to convert the radiant energy to heat to heat said downward depending portion when said first means is exposed to the radiant energy, such that said downwardly extending portion is heat shrunk around said container rim to form a spill resistant cover upon exposure to the radiant energy.

37. The cover of claim 36 wherein said first means comprises adapting said film substrate to absorb energy by imparting opacity to the downwardly extending area.

38. The cover of claim 36 wherein said first means comprises said film having tint, said tint being adapted to absorb radiant energy.

39. The cover of claim 36 wherein said first means comprises a coating on said film said coating being adapted to absorb radiant energy.

40. The cover of claim 39 wherein said radiant energy absorbent coating is printed into said film.

41. A roll of heat shrinkable film for use in a device for forming spill resistant covers on open-topped containers, said roll comprising:

a plurality of severable pieces of heat shrinkable film formed in a continuous web, each piece being shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container wherein said heat shrinkable film is a film substrate that contracts when

heated and which remains unchanged upon exposure to radiant energy, further wherein said downwardly extending portion is adapted to include a first means to absorb the radiant energy to transfer heat to said downwardly extending portion upon said first means being exposed to the radiant energy wherein said downwardly extending portion is heat shrunk onto said container to form a spill resistant cover upon exposure to the radiant energy source.

42. The cover of claim 40 wherein said radiant energy is infrared radiation and said radiant energy absorbing coating is an ink.

43. The cover of claim 36 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb said radiant energy.

44. The roll of heat shrinkable film of claim 41 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb radiant energy.

45. The cover of claim 43 wherein said radiant energy absorbent coating is carried by specific portions of the downwardly extending portion of said film substrate forming a radiant energy absorbing layer at those specific portions, and other portions of said film substrate are free of said radiant energy absorbent coating, and wherein upon said cover being exposed to the radiant energy said portions free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of said radiant energy absorbing coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

46. The roll of heat shrinkable film of claim 44 wherein said radiant energy absorbent coating material is carried by specific portions of the

downwardly extending portion of said film substrate forming a radiant energy absorbent layer at those specific portions, and other portions of said film substrate are free of radiant energy absorbent coating material, and wherein upon said heat-shrinkable film being exposed to a source of radiant energy said portions free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of radiant energy absorbent coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

EVIDENCE APPENDIX

A copy of each of the following items of evidence relied on by the Appellant (and/or the Examiner) is attached:

The following evidence was entered into the record by the Examiner in the Office Action mailed May 18, 2004:

1. Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph.

2. Reply brief filed August 2000, page 2, sixth paragraph, beginning "Once again."

3. Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6.

RELATED PROCEEDINGS APPENDIX

Copies of relevant decisions in the following related proceedings are attached:

NONE

EVIDENCE APPENDIX

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application	:	Bakker, W.
Serial No.	:	08/977,374
Filed	:	November 24, 1997
For	:	**SHRINKING FILM ONTO AN OPEN TOPPED CONTAINER**
Examiner	:	W. Watkins III
Art Unit	:	1772
Last Office Action	:	September 22, 1999
Attorney Docket No.	:	PZN 20017

Cleveland, Ohio 44114-2518
May 10, 2000

SUPPLEMENTAL APPEAL BRIEF

Assistant Commissioner
for Patents
Washington, D.C. 20231

Dear Sirs:

On October 7, 1999, Appellant appealed to the Board from the decision of the Primary Examiner of April 12, 1999, finally rejecting claims 36-46. Appellant's submitted an Appeal Brief in accordance with 37 C.F.R. §1.192(a) on April 7, 2000. The Examiner identified the Appeal Brief as defective in the letter of May 1, 2000, indicating that the concise explanation under 37C.F.R. §1.192(c)(5) failed to refer to the specification by page and line number. What follows is a supplemental brief, in triplicate, which addresses the Examiners concern..

I. REAL PARTY INTEREST (37 C.F.R. §1.192(c)(1))

The real party in interest in this appeal is the inventor named in the caption of this brief (William J. Bakker).

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. §1.192(c)(1))

There are no other appeals and/or interferences that will directly affect, or will be directly affected by, or will have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS (37 C.F.R. §1.192(c)(3))

The status of the claims set forth after the Final Office Action mailed was, and is, as follows:

Allowed claims: none

Rejected claims: 36-46

The present appeal is directed specifically to claims 36-46.

IV. STATUS OF THE AMENDMENTS (37 C.F.R. §1.192 (c)(4))

In the final Office Action of, the Examiner made the following rejections:

Rejections of Record

Claims 36-46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Heilman, et al (AU 27,337) in view of Konger (U.S. 3,760,154) further in view of Anderson, et al. (U.S. 5,113,479).

Claims 36-46 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1, 2, 15, 16, and 19 of copending application no. 08/699,332.

In an attempt to over come the outstanding rejections, the Appellant filed an After Final Response under 37 C.F.R. §116. The After Final Response addressed the prior art rejection issued by the Examiner.

An Advisory Action was then issued by the Examiner indicating that the After Final Response would be entered upon filing an appeal. The Examiner indicated that the rejection was being maintained.

V. SUMMARY OF THE INVENTION 37 C.F.R. §1.192 (c)(5)

The Present Application

A container cover comprising a heat-shrinkable film is provided which is susceptible to shrinkage at specific locations upon exposure to radiant energy. The specific locations are formed via incorporation of a material which absorbs the radiant energy. The radiant energy absorbing material is sufficiently opaque to prevent pass through of the radiant energy, thereby converting the radiant energy to heat energy which causes preferential shrinking of the packaging material at that particular location. Sections which do not contain the radiant energy absorbing material do not shrink. See specification at page 12, lines 16-37 through page 13, lines 1-25.

The claims of the present application require a heat-shrinkable film to be used as covers for open topped containers wherein the film is normally not susceptible to shrinkage upon exposure to radiant energy (see claim 36, for example). The film is rendered susceptible to shrinkage at particular locations where shrinkage is desired. In the present application a downwardly extending portion of the cover sized material is imparted with opacity to render the downwardly extending material opaque and thus susceptible to shrinkage (as set forth in claim 36, for example).

VI. ISSUES (37 C.F.R. §1.192(c)(6))

Rejections of Record

Whether claims 36-46 are unpatentable under 35 U.S.C. §103(a) over Heilman, et al (AU 27,337) in view of Konger (U.S. 3,760,154) further in view of Anderson, et al. (U.S. 5,113,479).

Whether claims 36-46 are unpatentable under the judicially created doctrine of obviousness-type double patenting over claims 1, 2, 15, 16, and 19 of copending application no. 08/699,332.

VII. GROUPING OF CLAIMS (37 C.F.R. §1.192(c)(7))

Appellant submits that claims 36-46 should stand or fall together.

VIII. ARGUMENTS (37 C.F.R. §1.192 (c)(8))

Rejection Under 35 U.S.C. §103(a)

The Examiner has rejected claims 36-46 under 35 U.S.C. §103(a) as being unpatentable over Heilman, et al. (AU 27,337) in view of Konger (U.S. 3,760,154) further in view of Anderson, et al. (U.S. 5,311,479). The Examiner's reasoning in the Office Action of November 24, 1998, provided at pages 4-5 (and incorporated into the Final rejection) is as follows:

> "Heilman, et al. teach a film which extends over the rim of a container and is heat shrunk onto the container by applying energy which may be in the form of infrared radiation to the edge first while the top is shielded, then to the top as an option to further tighten the film (page 10). The film may be transparent (page 3). Konger teaches the use of the infrared radiant heat directly on the overhanging edge of a transparent shrink wrap film in order to form a cover over an object to be packaged, the direct radiation on the edge is intense (abstract, col. 2, lines 35-45, col. 6, lines 60-69, col. 10, lines 15-25). Anderson, et al. teach the use of coloring on a edge to better absorb infrared radiation to raise the temperature to heat seal the edge of the film (abstract). The instant invention claims a printed area on the edge rim of a film lid to better absorb radiation in order to heat shrink the film. It would have been obvious to one of ordinary skill in the art to direct the infrared radiation of Heilman, et al. directly on the edge of Heilman, et al. in order to better shrink the transparent edge of Heilman et al. because of the teachings of Konger to use intense direct radiation on overhanging edges to be shrunk. It further would have been obvious to color the edge of the film of Heilman et al. in view of Konger in order to use less intense infrared energy but still cause shrinkage in order to save energy because of the teachings of Anderson et al. that the use of opaque areas increase absorbance of infrared radiation. Use of film in a roll to make lids and printing and use to tint to create opaque areas for infrared absorption are conventional."

Heilman is directed to a device which is similar to the Applicants in that it teaches the use of the heat shrink film to form lids on open topped containers. However, the disclosure of Heilman is quite different from the Applicants claimed invention with respect to the film. In fact, it is submitted that a careful examination reveals that Heilman teaches directly away from the Applicants invention as now claimed.

At page 2, Heilman teaches that

> "...when a piece of heat shrinkable oriented plastic film is subjected to heat of any type, it will shrink and shrivel into an irregular ball-shaped configuration due to its inherent oriented characteristics. However, when the central or interior portion of the film is shielded or otherwise insulated from the direct or indirect influence of heat while the perimeter or rim area is subjected to heat, only the rim area will shrink and will be reduced ..."

(Emphasis added).

At page 3, Heilman teaches that his invention is to provide a method using a transparent (preferably) heat shrinkable oriented plastic film or sheet. At pages 9 and 10, Heilman teaches leaving the exposed edges of the film exposed to blasts of hot air or steam, or to heat caused by high frequency electricity, electrical resistance, infrared or other heat, supplied to the ring or directly to the film in conventional manner. Later on page 10, the references teaches that:

> "Obviously, an oven heated by infrared heat lamps or any other heat would be within the spirit of my invention. The sole consideration is that a shield tightly pressed against the container rim must be provided before the film-covered container enters the heated area so that the skirt of the film will be selectively shrunk first to provide a tight but elastic and flexible edge bead around the container and removably retain the cover on the container. If the shield is not pressed tightly against the container rim, to thereby shield and restrain the entire area within the month of the container when the film edges are being heated, no seal will result."

The Examiner has indicated that Heilman teaches application of infrared radiation directly to the edge of the film which extends over the edge of a container to cause shrinkage of the film at page 2, paragraph 2 of the Final Office Action (April 12, 1999). This is simply not the case. **At page 5, lines 5-7 of the Final Office Action, the Examiner admits that Heilman**

does not explicitly teach direct exposure of IR energy to the edge of the film. As was set forth in the previous response, and even according to the cited text referred to by the Examiner (page 10 of Heilman), infrared radiation is used to cause hot air which shrinks the film. However, a transparent film, alone, will pass infrared energy right through without transforming the radiant energy into heat energy. Thus, in Heilman, an oven type device supplied with infrared energy initially converts the infrared energy to heat which heat, ultimately, heats a surface of the transparent shrink wrap film causing said film to shrink. In fact, Heilman teaches blocking or covering areas of the film where shrinkage is not desired as the heat, not the IR energy, will shrink all exposed areas of the film. By itself, infrared radiation will not have any effect on the transparent shrink wrap of the Heilman reference film. Because Heilman fails to suggest imparting some opacity to a transparent film, there is simply no mechanism by which radiant energy, alone, would cause film shrinkage.

In summary, although Heilman suggests use of infrared radiation, he only teaches radiation as the heating mechanism of an oven. Thus, Heilman teaches using this as a heat source for heating air, not the film. This is confirmed by the teaching that transparent film is preferred. Transparent film is not directly heated under infrared radiation since the radiation will passes unimpeded through transparent film. **That Heilman means to only the heat air is also confirmed, because Heilman teaches that a top shield is essential. A top shield is only essential with a with a diffuse heat source, such as hot air**. There is simply no teaching in this reference of using an infrared radiation source as a way of transmitting energy directly to the film. In fact, Heilman teaches away from using the energy source in this way, with its references to "hot blasts", transparent film and the necessity of a top shield.

The Examiner, recognizing some deficiency in the Heilman reference with respect to the select opaque surfaces of the presently claimed invention, has cited **Konger** for teaching the use of infrared radiant heat directly on an overhanging edge of a transparent shrink wrap film in order to form a cover over an object to be packaged. The direct radiation is disclosed as being intense.

Contrary to the Examiner's assertion, while Konger does indicate that infrared radiant heat is utilized to shrink a transparent plastic film, it is important to recognize that the infrared radiant heat is generated in conjunction with **a heat tunnel or oven**. This is necessary in that infrared radiation, by itself, does not affect the shrinking of transparent film absent some absorbing medium which generates heat. **Konger utilizes the heat from the oven to effectuate**

the shrinkage of the transparent film not infrared radiant energy alone. The Examiner appears to be of the opinion that when Konger refers to infrared heat to shrink the film, that the infrared energy is the same as infrared heat. However, this is an incorrect interpretation. Quartz tubes in Konger generate infrared energy to a heat tunnel or oven which produces infrared heat, said infrared heat thereby causing the film shrinkage. No teaching of modification of the film to allow infrared energy, alone, to effectuate shrinkage is presented in Konger. The present technique avoids the need for a separate heat generating mechanism when shrinking transparent film in a predetermined, preferential manner.

The present application effectuates preferential shrinkage by selectively forming opaque sections on film which is normally not affected by radiant energy so as to impart preferential shrinkage at the opaque locations. No mechanism for preferential shrinkage is suggested in Konger which eliminates the need for a reflective-type oven device. Thus, contrary to the Examiner's assertion, Konger fails to remedy the deficiencies of Heilman in teaching a modified heat-shrinkable film which is capable of preferential shrinkage in a predetermined manner. As such, there is simply no motivation in the art for directing infrared radiation onto the edge of a film for a lid to effectuate preferential shrinkage in a determined manner.

The Examiner has again relied on Anderson, et al. for teaching the use of colored material on the edge of a thermoplastic film to better absorb infrared radiation along the edge in a **heat sealing** process. However, Anderson differs from the present claims (and from Heilman) in a materially significant way. Anderson is concerned with applying infrared radiation to a specific location on an entirely opaque material (a package). The infrared radiation is directed to particular spots via reflectors to avoid heating (and subsequent melting) of the entire surface of the thermoplastic material. Various portions of the thermoplastic laminate may be preprinted with a colored strip to enable less infrared radiation to be used when heating the material.

Thus, a critical difference in Anderson is that Anderson does not concern transparent shrink wrap technology at all. Anderson is concerned with melting (as opposed to shrinking) a thermoplastic laminate on a packaging material at specified locations to enable welding on a packaging material. The colored markings are optional in Anderson as the entire laminated material is opaque and thus able to generate heat when supplied with radiant energy. None of the problems associated with shrink wrap technology are addressed by Anderson as Anderson is concerned with an entirely different problem. Anderson *limits* the exposure area of the infrared radiation which converts radiant energy to heat. Applicants have done exactly the opposite.

Applicants have *increased* the area of a transparent shrink wrap film which converts radiant energy to heat energy. This is clearly not taught nor suggested by Anderson, either alone or in combination with Heilman and/or Konger.

As such, the Examiner has provided no motivation to combine the teachings of the cited art. When considering the teaching of a particular reference, it is the teaching of the reference, as a whole, which must be considered. It is not proper for the Examiner to "pick and choose" selected portions of the cited art and, with the benefit of the Applicants disclosure, render the claims obvious. The teachings must be viewed in their entirety, including any teaching away from the invention. In the present case, the Examiner has simply ignored the overall teaching of the references and merely combined the unrelated art using the present disclosure as a motivation to do so.

Even assuming, for arguments sake, that the Examiner's combination is proper, it is respectfully submitted that Applicants invention is not a mere obvious combination of the teachings of Heilman, Konger and Anderson. In the Applicants respectful submission, a person of ordinary skill in the art would not be motivated to combine Heilman, Konger and Anderson, because the teachings of Anderson are redundant to Heilman and Konger. Heilman, for example, teaches that it is essential to control the top shrink of a shrinkable film. In light of this, the teachings of Anderson, even if applicable (which is not admitted since Anderson teaches heat welding plastic and has nothing to do with heat shrinking), are redundant to Heilman. Why would a person of ordinary skill in the art combine heat concentrating strip of Anderson to over come a problem already clearly overcome by Heilman by using a top shield? There is simply no motivation provided in the art for a person skilled in the art to make the Examiner's combination. The problem addressed by Anderson is already adequately solved by Heilman. It is only with the benefit of Applicants disclosure that the Examiner has made the combination, having already understood and recognized the benefits of the Applicants idea. **In the Applicants respectful submission, the standard to be applied is not <u>could</u> the references be combined in the way the Examiner has, but <u>would</u> they have been so combined by a person of ordinary skill in the art using motivation provided <u>by the art</u>?** A person of ordinary skill in the art would recognize that Heilman teaches a complete solution for shrinking the downwardly extending film, by shielding the top. In this context, such a person would not need the concentrating advantages taught by Anderson. Thus, there is simply no basis for holding that a person <u>would</u> make the combination, absent the Applicant's own disclosure.

The Applicants were first to realize the benefits of *adapting* a heat shrinkable film to directly absorb radiant energy such as infrared energy, instead of using the same indirectly to heat the air, which then impinges on the film as taught by both Heilman and Konger.

In view of the foregoing, the Applicants submit that the invention as presently claimed is not obvious in light of either Heilman, Konger or Anderson, whether taking singly or in combination as the Examiner has suggested.

Allowability of Copending Application 08/669,332

Applicant would like to again point out that claims 1-22 of copending application serial no. 08/669,332 were recently allowed. Given that the art cited in the present application was cited in the copending application and the claims held allowable thereover and given that the present application currently has a provisional obviousness-type double patenting rejection over the independent claims of 08/669,332, Applicant respectfully requests that the Office Action be consistent in the decision regarding the copending applications.

Specifically, if the claims of the present application are held to the obviousness-type double patenting rejection over allowed claims 1-22 of 08/669,332, then the prior art rejection under 35 U.S.C. §103 should be withdrawn. Conversely, should the Examiner maintain that the rejection under 35 U.S.C. §103 is proper, which Applicant clearly submits is not the case, then the provisional obviousness-type double patenting rejection should be withdrawn.

Additionally, as a matter of interest, the Applicant notes that claims of the same scope in the present application were found to include both the required novelty and inventive step under CH II Preliminary Examination in the Patent Cooperation Treaty Application.

Provisional Rejection Based on Obviousness-Type Double

Claims 36-46 have been provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 2, 15, 16, and 19 of copending application serial no. 08/699,332.

Applicants have now received a Notice of Allowability in copending application serial no. 08/699,332 wherein claims 1-22 were indicated as being allowed over the prior art of record. Upon receipt of an indication of allowable subject matter in the present

application, Applicants will review the conflicting claims and provide a terminal disclaimer, if appropriate, to address the obviousness-type double patenting issue.

CONCLUSION

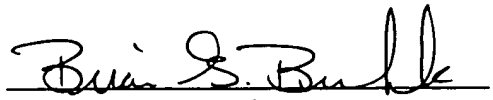
It is submitted that claims 36-46 are patentable over the cited art for the reasons set forth herein.

Appellants' respectfully request that the Examiner's rejections be reversed.

Respectfully submitted,

FAY, SHARPE, FAGAN

MINNICH & McKEE



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IX. APPENDIX OF CLAIMS (37 C.F.R. §1.192 (c)(9))

36. (Twice Amended) A cover for sealing an open-topped container comprising:

a piece of heat shrinkable film shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container, wherein said piece of heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy further wherein said downwardly extending portion is adapted to include a first means to absorb radiant energy to transfer heat to said first means being exposed to a radiant energy source wherein said downwardly extending portion is heat shrunk onto said container to form a spill resistant cover upon exposure to a radiant energy source.

37. (Amended) The cover of claim 36 wherein said first means comprises adapting said film substrate to absorb energy by imparting opacity to the downwardly extending area.

38. The cover of claim 36 wherein said first means comprises said film having tint, said tint being adapted to absorb radiant energy.

39. The cover of claim 36 wherein said first means comprises a coating on said film said coating being adapted to absorb radiant energy.

40. The cover of claim 39 wherein said radiant energy absorbent coating is printed into said film.

41. (Twice Amended) A roll of heat shrinkable film for use in a device for forming spill resistant covers on open-topped containers, said roll comprising:

a plurality of severable pieces of heat shrinkable film formed in a continuous film, each piece being shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container wherein said heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy, further wherein said downwardly extending portion is adapted to include a first means to absorb radiant energy to transfer heat to said downwardly extending

portion upon said first means being exposed to a radiant energy source wherein said downwardly extending portion is heat shrunk onto said container to form a spill resistant cover upon exposure to a radiant energy source.

42. The cover of claim 40 wherein said radiant energy is infrared radiation and said radiant energy absorbing coating is an ink.

43. (Amended) The cover of claim 36 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb said radiant energy.

44. (Amended) The heat shrinkable film of claim 41 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb radiant energy.

45. (Amended) The cover of claim 43 wherein said radiant energy absorbent coating is carried by specific portions of the downwardly extending portion of said film substrate forming a radiant energy absorbing layer at those specific portions, and other portions of said film substrate are free of said radiant energy absorbent coating, and wherein upon said cover being exposed to a source of radiant energy said portions free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of said radiant energy absorbing coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

46. (Amended) The heat shrinkable film of claim 44 wherein said radiant energy absorbent coating material is carried by specific portions of the downwardly extending portion of said film substrate forming a radiant energy absorbent layer at those specific portions, and other portions of said film substrate are free of radiant energy absorbent coating material, and wherein upon said heat-shrinkable film being exposed to a source of radiant energy said portions

free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of radiant energy absorbent coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application	:	Bakker, W.
Serial No.	:	08/977,374
Filed	:	November 24, 1997
For	:	**SHRINKING FILM ONTO AN OPEN TOPPED CONTAINER**
Examiner	:	W. Watkins III
Art Unit	:	1772
Last Office Action	:	June 20, 2000
Attorney Docket No.	:	PZN 20017

Cleveland, Ohio 44114-2518
August 21, 2000

REPLY BRIEF UNDER 37 C.F.R. §1.193

Assistant Commissioner
for Patents
Washington, D.C. 20231

Dear Sirs:

This Reply Brief is submitted (in triplicate) in response to the Examiner's Answer issued on June 20, 2000 in the above referenced patent application.

REMARKS

In the Examiner's Answer, the Examiner maintains a rejection based on obviousness-type double patenting over claims 1, 3, 4, 5 and 19 of U.S. Patent No. 5,993,942. The Examiner indicates that while the claims are not identical, they are not patentably distinct because, in the Examiner's opinion, the claims differ only in the language used to describe the same structure (See Examiner Answer, p. 5, paragraph no. 2).

Additionally, in spite of issuing an obviousness-type double patenting rejection over issued U.S. patent claims, the Examiner maintains a rejection under 35 U.S.C. §103(a) over Heilman et al. (AU 27,337) in view of Konger (U.S. 3,760,154) further in view of

Anderson et al. (U.S. 5,113,479).

Appellants would like to point out that during the prosecution of the patent identified in the obviousness-type double patenting rejection (U.S. 5,993,942), the Examiner was aware of this application in that a provisional obviousness type double patenting rejection was also issued in that application over the present application. Also, the Examiner of the application which resulted in the '942 patent chose to use Heilman et al. and Anderson et al. in a prior art rejection. However, such art was overcome and the claims were held allowable thereover.

In spite of the above, the Examiner in this application continues to maintain both 1) the prior art rejection using both Heilman et al. and Anderson et al. (and also Konger) and 2) the obviousness type double patenting rejection over the '942 patent where Heilman et al. and Anderson et al. were already considered and overcome. Appellants believe such inconsistent prosecution by the U.S. Patent and Trademark Office is detrimental to the value of issued U.S. patents as it calls into question the presumption of validity under 35 U.S.C. §282 of issued U.S. patents.

Aside from the above, Appellants would like to again point out some inaccuracies in the Examiner's assessment of the cited art.

In the rejection of page 4, §10, paragraph No. 1 of the Examiners Answer, the Examiner continues to describe each of Heilman et al. and Konger as teaching use of infrared radiation to shrink transparent film.

Once again, as adamantly emphasized in the Appeal Brief, Appellants would like to point out that infrared radiation applied to transparent film, by itself, will pass directly through the film. No shrinkage will occur without the claim designated modification to the film. Each of Heilman et al. and Konger rely on the infrared radiation to heat an opaque surrounding surface which, in turn, heats the air wherein said hot air causes the shrinkage of the transparent film. This is simply not the Appellants invention.

Appellants have modified the film itself to be absorbent to radiant energy thereby providing for a mechanism to effectuate preferential shrinkage of the film at those locations having said opaque portions thereon. Even if, as the Examiner contends in the Examiner's Answer at p. 6, that the load behind the transparent film heats the film (as suggested by Konger), that is not what is being claimed nor would preferential shrinkage of the film be attained. In fact, Konger specifically recites that it is infrared radiant *heat* which

causes said film to shrink. This heat is generated from the load or the surrounding oven and not the film itself. The present claims recite a modified film having means to absorb radiant energy on the film itself. In this manner, the preferential shrinkage can be attained.

Anderson et al., in contrast to the Examiner's assertions, is directed to a completely unrelated problem. Anderson is concerned with applying infrared radiation to a specific location on an entirely opaque material (a package). The infrared radiation is directed to particular spots via reflectors to avoid heating (and subsequent melting) of the entire surface of the thermoplastic material. Various portions of the thermoplastic laminate may be preprinted with a colored strip to enable less infrared radiation to be used when heating the material.

Thus, a critical difference in Anderson is that Anderson does not concern transparent shrink wrap technology at all. Anderson is concerned with melting (as opposed to shrinking) a thermoplastic laminate on a packaging material at specified locations to enable welding on a packaging material. The colored markings are optional in Anderson as the entire laminated material is opaque and thus able to generate heat when supplied with radiant energy. None of the problems associated with shrink wrap technology are addressed by Anderson as Anderson is concerned with an entirely different problem. Anderson *limits* the exposure area of the infrared radiation which converts radiant energy to heat. Applicants have done exactly the opposite. Applicants have *increased* the area of a transparent shrink wrap film which converts radiant energy to heat energy. This is clearly not taught nor suggested by Anderson, either alone or in combination with Heilman and/or Konger.

As such, the Examiner has provided no motivation to combine the teachings of the cited art. When considering the teaching of a particular reference, it is the teaching of the reference, as a whole, which must be considered. It is not proper for the Examiner to "pick and choose" selected portions of the cited art and, with the benefit of the Applicants disclosure, render the claims obvious. The teachings must be viewed in their entirety, including any teaching away from the invention. In the present case, the Examiner has simply ignored the overall teaching of the references and merely combined the unrelated art using the present disclosure as a motivation to do so.

The Applicants were first to realize the benefits of *adapting* a heat shrinkable film to directly absorb radiant energy such as infrared energy, instead of using the same indirectly to heat the air, which then impinges on the film as taught by both Heilman and Konger.

In view of the foregoing, the Applicants submit that the invention as presently claimed is not obvious in light of either Heilman, Konger or Anderson, whether taking singly or in combination as the Examiner has suggested.

CONCLUSION

It is submitted that claims 36-46 are patentable over the cited art for the reasons set forth in the Appeal Brief and those set forth herein.

Appellants' respectfully request that the Examiner's rejectiosn be reversed.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this **Reply Brief Under 37 C.F.R. §1.193** in connection with U.S. Patent Application Serial No. 08/977,374 is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on August 21, 2000.

Dottie M. Freeland

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of W. BAKKER, et al.	Examiner: W. WATKINS III
Serial No.: 08/977,374	Art Unit: 1772
Filed: November 24, 1997	Confirmation: 3062
DEVICE FOR HEAT SHRINKING FILM ONTO AN OPEN-TOPPED CONTAINER	
Date of Office Action: May 18, 2004	
Attorney Docket No.: PZNZ 2 00017-1	Cleveland, OH 44114 December 17, 2004

APPEAL BRIEF UNDER 37 C.F.R. § 1.41

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

On October 20, 2004, Appellant filed a Notice of Appeal from the rejection of claims 36-46 in the Office Action of May 18, 2004. What follows is Appellant's Appeal Brief (submitted in triplicate) in accordance with 37 C.F.R. 1.41.

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is the inventor William J. Bakker, named in the caption of this brief.

II. RELATED APPEALS AND INTERFERENCES

Appellant withdrew the Appeal in the parent application. No decision was rendered by the Board. There are no other appeals and/or interferences.

II. STATUS OF CLAIMS

Claims 36-46 are on appeal.

Claims 36-46 are pending.

Claims 36-46 are rejected.

Claims 1-35 are canceled.

IV. STATUS OF AMENDMENTS

The Amendment of February 12, 2004 was entered. No Amendment after the May 18, 2004 Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 36 is directed to a cover for sealing an open-topped container **12** (page 4, lines 11-12, Figs. 5-8). The cover includes a piece **102** of heat shrinkable film **26** (Figs. 5 and 8; page 4, line 34-page 5, line 8). The piece of heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy (page 12, lines 16-28). The radiant energy, as noted in the specification at page 9, lines 32-36, may be provided by a tungsten halogen lamp which produces energy in the infrared. The film is shaped and sized to cover the open top **13** of the container and to have a downwardly extending portion **103** around an upper rim of the container (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). The downwardly extending portion **103** includes a means which converts the radiant energy to heat to heat the downward depending portion when the means is exposed to the radiant energy (page 12, lines 29-32, page 13, lines 2-5). The converting means, as described in the specification, may include adapting the film to absorb energy by the film being made from a tinted material or by being coated with an energy

absorbent coating, for example, by printing (page 12, line 29-page 13, line 5). The downwardly extending portion is thereby heat shrunk around the container rim to form a spill resistant cover upon exposure to the radiant energy (page 8, lines 32-36; page 12, line 29-page 13, line 5).

As will be appreciated, those portions of the cover which lack the radiation to heat converting means are unchanged upon exposure of the cover to the radiant energy. This enables a selective shrinking of the downward depending portion where it is heated by the converting means, while enabling the portion of the cover covering the container top to be substantially unaffected. The cover thus enables the container to be sealed without substantial build up of heat in the container and thus minimizes potential damage to the contents therein caused by heating. The cover also avoids the need for shielding the top of the container from a heat source during the sealing step.

Claim 41 is directed to a roll of heat shrinkable film **22** (page 4, lines 22-23; Fig. 5) for use in a device for forming spill resistant covers on open-topped containers **12**. The roll includes plurality of severable pieces **102** of heat shrinkable film formed in a continuous web (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). Each piece is shaped and sized to cover the open top **13** of the container and to have a downwardly extending portion **103** around an upper rim of said container (page 7, line 25-page 8, line 10 and lines 35-36; Fig. 6). The heat shrinkable film is a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy (page 4, line 34-page 5, line 8; page 12, lines 16-28). The downwardly extending portion is adapted to include a first means to absorb the radiant energy to transfer heat to said downwardly extending portion upon the first means being exposed to the radiant energy. The first means, as described in the specification, may include the film being adapted to absorb energy, for example, by the making the film from a tinted material or by coating the film with an energy absorbent coating, for example, by printing (page 12, line 29-page 13, line 5). The downwardly extending portion is heat shrunk onto the container to form a spill resistant cover upon exposure to the radiant energy source (page 12, lines 16-18 and 29-32).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1. Claims 36, 37, 38, and 41 are rejected as being obvious under 35 U.S.C. §103(a) over Heilman, et al. (Australia 27,337) in view of Amberg, et al. (U.S. Patent No. 3,955,699) and further in view of Applicants' alleged admissions in the Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph, in the Reply Brief filed August 2000, page 2, sixth paragraph, beginning "Once again," and in the Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6.

2. Claims 39-40 and 42-46 are rejected as being obvious under 35 U.S.C. §103(a) over Heilman, et al. (Australia 27,337) in view of Amberg, et al. (U.S. Patent No. 3,955,699) and further in view of Applicants' alleged admissions in the Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph, in the Reply Brief filed August 2000, page 2, sixth paragraph, beginning "Once again," and in the Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6, and further in view of Anderson, et al. (U.S. Patent No. 5,113,479).

VII. ARGUMENT

A. Claims 36-46 Are Patentable Over The References Of Record

1. Claims 36, 37, 38 Are Patentable over Heilman, et al. in View of Amberg, et al. and Further in View of Applicant's Alleged Admission

The **Heilman** (AU 27 337) patent discloses a heat shrinkable, plastic film. When the film is subjected to heat of any type, it will shrink (page 2, first paragraph). As illustrated in FIGURE 1, the film **10** is advanced beyond a severing means **31** where it is cut (page 7, second paragraph). The cut film is positioned above a container **16** (page 9, first paragraph). A shield **44** shields the central area of the film while leaving the edges of the film exposed to blasts of hot air or steam or to heat caused by high frequency electricity, electrical resistance, infrared heat or other heat supplied to a circular heating ring **40** or directly to the film (page 9, third paragraph). The skirt edge is exposed to the heat from any source and shrunk onto the container (page 9, fourth paragraph). The shield **44** is required to be pressed tightly against the container rim before the film covered container enters the heating area, to thereby shield and restrain the entire area within the mouth of the container when the film edges are being heated, otherwise no seal will result. The element **44** thus functions

as both a clamp and a shield (page 10, second paragraph). The container is then lowered and the central area of the film optionally is shrunk (page 9, fourth paragraph, page 10, second paragraph).

Thus, Heilman makes no suggestion of configuring the skirt portion of the film of material which is in anyway different from the central portion. To the contrary, Heilman teaches against such a concept by requiring the use of a shield to shield the central portion from the heat applied to the skirt. When the container of Heilman is lowered, it passes by the heater ring causing the top to shrink because the same heater ring mechanism shrinks both the skirt and the top; it is therefore essential that both be configured of like material. There is no suggestion that the skirt should be configured of material which converts radiant energy into heat.

The Examiner asserts that Applicant's Amendment of February 17, 2004, and Appeal Brief filed April 7, 2000, and supplemented on May 9, 2000, are an admission that "the film substrate of Heilman, et al. remains unchanged upon exposure to radiant energy, as is instantly claimed." (Office Action of May 18, 2004, page 3, second paragraph). The Applicants' amendment of February 17, 2004, states, in part:

> **Claim 36** calls for a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The Heilman film contracts when heated. **However, it does not state whether or not it also contracts in response to infrared light.** The ultimate and antiultimate lines of paragraph 3 of page 10 suggest that Heilman's film likely contracts when exposed to either heat or infrared light, but it's not clear. **In any case, Heilman does not suggest that the film should remain unchanged upon exposure to infrared light.**

(page 10 of Amendment filed February 12, 2004; emphasis added). The amendment thus cannot be construed as an admission that the film substrate of Heilman, et al. remains unchanged upon exposure to radiant energy. Rather, it is understood that Heilman is not sufficiently clear for one of ordinary skill in the art to gain a teaching which would render the presently claimed invention obvious.

Amberg (U.S. 3,955,699) discloses a container lid **11** for a container **12** formed of a thermoplastic material (col. 2, line 61-col. 3, line 1). The closure **11** is of a two-piece construction, the pieces comprising a disc-like central panel **14**, which substantially spans the mouth of the container, and an annular skirt **15** (col. 3, lines

17-20). The central portion is formed from a sheet-like material, such as paperboard or plastic (col. 3, lines 28-33). The skirt is formed of a rectangular strip of thermoplastic material which is wound into a cylinder, and heat sealed to join the edges together (col. 3, lines 62-66). The cylinder is then inserted over a mandrel having an external surface with a configuration which is the internal surface of the skirt as it appears in FIGURE 1 (col. 3, lines 63-col 4, line 3). The strip is then exposed to heat while it is on the mandrel to cause it to shrink to the shape of the mandrel (col. 4, lines 3-6). The central panel **14** is joined to the skirt is either before or after the skirt is removed from the mandrel (col. 4, lines 6-8). Once the lid is positioned on a cup, the skirt, which is opaque to infrared radiation, is shrunk by the application of infrared radiant energy (col. 4, lines 44-50).

Thus, the skirt **15** of Amberg is a different construction which, during the manufacture of the lid, is bonded to the central panel **14**. There is no suggestion of forming the lid of Amberg from a sheet. Further, Amberg makes no suggestion that the central panel **14** be a shrinkable material which is shrinkable either by heat.

In another embodiment, shown in Figure 5 of Amberg, a central panel **114** is formed from a sheet of thermoplastic material. The closure also includes a heat-shrinkable skirt piece **115**, which is similar to skirt piece **15,** except for lacking the vertical sections **17b** and **17c** (Fig. 5, col. 5, lines 30-42).

In both embodiments, the skirt **15** is formed with an overlapped portion or free end **25** which serves as a graspable tab by which the closure skirt may be readily unwound and torn from the central panel **14, 114** when it is desired to open the container (col. 5, lines 18-29). Thus, Amberg suggests that the closure should be made of multiple materials including a circumferentially wrapped strip which forms the skirt **15, 115** and is lapped to form a pull tap **25.**

The Examiner takes the position that it would have been obvious to one of ordinary skill in the art to join an opaque heat shrinkable thermoplastic material to the downwardly extending edge portion of Heilman, et al. or make the downwardly extending portion of an opaque heat shrinkable thermoplastic material to directly absorb infrared radiation and use only a limited number of lamps, as taught by Amberg, et al. (Office Action of May 18, 2004, page 4, note 3).

For the reasons outlined below, Appellant respectfully traverses.

a. Combining Amberg with Heilman Does not Result in the Claimed Cover

The combination of Amberg with Heilman does not arrive at the presently claimed invention. Claim 36 recites a piece of heat shrinkable film shaped and sized to cover the open top of a container and to have a downwardly extending portion.

The combination of Amberg's skirt **15** with Heilman's top would yield a two piece, three dimensional construction, not a piece of heat shrinkable film. Amberg's skirt is required to be three dimensional, in order that the closure is stackable (col. 3, lines 34-48).

The Examiner asserts that it would have been obvious to "join an opaque heat shrinkable thermoplastic material to the downwardly extending edge portion of Heilman." (Office Action of May 18, 2004, page 4, bottom of the page). However, this is contrary to the teachings of the references. There is no suggestion, in either reference, that Amberg's skirt material be attached as a two dimensional sheet to a sheet material. Rather, at the very least, Amberg calls for a strip that is formed into a cylindrical shape before attachment to the top of Amberg.

Moreover, the Examiner has not shown how one of ordinary skill in the art could incorporate Amberg's skirt material into the film of Heilman while retaining Heilman's film. Nor has the Examiner shown how one of ordinary skill in the art would incorporate the alleged properties of Amberg's skirt into the film of Heilman to achieve the presently claimed cover.

b. Amberg Teaches Away from the Claimed Invention

Claim 36 calls for the piece of film to be a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The skirt **15** of Amberg deforms when heated, as is evident from being shaped on a heated mandrel, and also shrinks when irradiated with infrared energy from bulbs **21**. Thus, Amberg clearly teaches away from a downwardly extending portion of a film which remains unchanged upon exposure to radiant energy but yet which includes a means to convert radiant energy to heat.

c. Combining Amberg with Heilman Defeats the Objects of Heilman

The Examiner argues that "modification of Heilman, et al. does not destroy the function of Heilman, et al." Appellant respectfully traverses.

One problem Heilman seeks to overcome is to provide a process for heat sealing containers in an automated process with film from a roll (page 3, third paragraph). Adding the preshaped skirts of Amberg would prevent the material from being dispensed in roll form, requiring instead that each top be individually preformed, a complex and expensive process.

Another problem Heilman seeks to solve is preventing the top portion of a film from being heated until the skirt has been sealed to the container (page 2, first and second paragraphs). This is achieved in Heilman by covering the top portion during heating of the skirt and then removing the shield to allow the top to be heated. If Amberg's skirt were to be combined with Heilman's film, and heat used to shrink the skirt, the top portion would still need to be covered while the skirt is heated. Assuming, arguendo, that the top of Heilman were to be formed from a film which remains unchanged upon exposure to infrared light, as the Examiner suggests, and that infrared radiation, rather than heat were to be applied, combining Amberg with Heilman would prevent the top of Heilman from being shrunk in a second step.

Further, in using a film, Heilman seeks to provide a method by which the film can be restrained during sealing. Heilman requires the shield **44** to be present and pressed tightly against the container rim before the film-covered container enters the heating area, to restrain the film. The shield **44** thus functions as a clamp (page 10, second paragraph). Thus, even if the skirt of Amberg removed the need for a shield to prevent the top of Heilman from shrinking during sealing of the skirt, there is no suggestion in either reference as to how the shield could be eliminated and the top restrained, other than by using a three dimensional skirt, which, once again, would defeat the first objective, discussed above. Thus, combining Amberg's skirt with Heilman's top adds complexity to Heilmans's structure without providing a recognizable benefit.

Thus, the combination of Amberg with Heilman defeats the objectives of Heilman.

d. <u>There is no Motivation in Amberg or Heilman for the Presently Claimed Cover</u>

Neither reference teaches or fairly suggests the selective and sequential use of <u>two</u> different methods of shrinking a film onto a container. Without the realization that one method of shrinking (infrared radiation) can be used for the skirt, while

another method (direct heat) can be used when it is desired to shrink the top, there is no motivation for providing materials for a top and skirt which respond differently to infrared radiation and direct heat. Heilman shrinks both the skirt and the top with the same heat source. Thus, to operate in its current and intended manner, all portions of the Heilman material would need to be treated the same. Having a skirt responding differently to the top would serve no purpose in Heilman.

The Examiner suggest that "using direct infrared radiation with an opaque material is taught (by Amberg) as being advantageous because only a few IR lamps are needed for this direct exposure (col. 4, lines 45-50)." However, the Examiner has not provided any motivation for providing a skirt which is different from the top of Heilman. Rather, the Examiner's argument would provide motivation for replacing Heilman's entire film (assuming arguendo, as the Examiner suggests, Heilman's film remains unchanged upon exposure to radiant energy) with Amberg's skirt material.

Accordingly, Appellant requests that the Board reverses the rejection of claim 36, and claims 37-38 dependent therefrom over the combination of Heilman with Amberg.

2. Claims 39-40 Are Patentable over the Combination of Heilman, Amberg, and Anderson, and Applicant's Alleged Admissions

The **Anderson** patent (US 5,113,479) discloses a method of infrared heating a restricted area on a continuous thermoplastic laminated web. The laminate consists of a paper or cardboard layer which is laminated on both sides with a thermoplastic (col. 1, lines 20-23). The laminate may also include an aluminum foil. To protect the laminate while it is formed into a tube, a narrow edge of thermoplastic is allowed to project out beyond the laterally defining line of the laminate (col. 1, lines 29-37). This strip is later folded over and sealed against the laminate surface of thermoplastic (col. 1, lines 38-42). As shown in FIGURE 1, an IR lamp **1**, fitted with a reflector **2** is positioned to concentrate radiation on a restricted area **7** of the paper and plastic laminate **4** (col. 2, lines 31-42). The restricted area is adjacent the thermoplastic edge **5**, which remains unheated (col. 2, lines 61-62). As shown in FIGURE 2, the area **7** of the laminate, to which the radiation is restricted, is preprinted with a colored strip **6**, which absorbs heat from the IR lamp (col., 3, lines 11-14). In this manner, the colored strip concentrates the heating of the layer **4** in the area where the thermoplastic material on its opposite surface is to be melted.

Thus, Anderson teaches away from heating a downwardly extending portion of a piece of heat shrinkable film. Rather, Anderson teaches restricting IR radiation to a restricted area **7** of the laminate spaced from the edge **5**. The laminate does not shrink on heating. Heating the strip **6** of Anderson does not cause shrinkage of the thermoplastic layer of the laminate, only melting. Moreover, over-hanging portion **5** of Anderson, which is most analogous to the skirt of the base reference, is not caused to shrink upon exposing the strip **6** of Anderson to infrared radiation. Quite to the contrary, Anderson specifically teaches that edge **5** should be protected from heating.

The Examiner asserts that it would have been obvious to make the downwardly extending portion of the film of Heilman, et al. better able to absorb IR radiation by the use of dark printing ink in order to reduce energy consumption because of the teachings of Anderson.

For the reasons outlined below, Appellant respectfully traverses.

a. Anderson Does not Cure the Deficiencies of the Primary References

The arguments regarding the combination of Heilman with Amberg and Applicants' alleged admissions in section 1 above are reiterated. Anderson does not cure the shortcomings of Heilman and Amberg with respect to the non-obviousness of combining these references. The thermoplastic layer of Anderson's laminate **4** softens when heated. Anderson does not teach or fairly suggest that the thermoplastic layer should shrink under either heat or infrared energy. Moreover, the fact that Anderson uses a reflector **2** to prevent the infrared light from reaching the exposed portion **5** of the thermoplastic edge suggests that the thermoplastic film is adversely affected by infrared light and that it in some way changes a physical property. Thus, none of the references teach or fairly suggest a heat shrinkable film substrate which contracts when heated but which remains unchanged upon exposure to radiant energy.

b. The Combination of Anderson with Heilman and Amberg Does not Teach a Coating on a Film, the Coating Being Adapted to Absorb Radiant Energy

Anderson teaches softening restricted area **7** of a layer of a multilayer laminate **4** that has been printed with a black strip **6** with IR radiation. There is no suggestion in Anderson of using IR radiation to shrink a film by use of the strip **6**. Thus, the

infrared light is focused by the reflectors on the non-thermoplastic material and blocked from directly irradiating the exposed thermoplastic material along edge **5**.

The strip of thermoplastic material is heated to soften it, not to shrink it. Indeed, it is submitted that shrinkage would cause cracking and creasing of the paper and aluminum layers - - something which Anderson expressly teaches should be avoided. The softened strip facilitates folding over the edge, which edge should be unheated to remain manageable (col. 2, l. lines 61-68).

c. Anderson Does not Teach a Film Substrate which Remains Unchanged when Exposed to Radiant Energy

Anderson requires that a reflector **2** to direct the radiation from IR lamps on a restricted area so that the edge **5** is not physically affected (col. 2, lines 61-63). This does not suggest a substrate which remains unchanged when exposed to radiant energy, but rather suggests the opposite.

d. Anderson Is Unrelated Art

A critical difference in Anderson is that Anderson does not concern transparent shrink wrap technology at all. Anderson is concerned with melting (as opposed to shrinking which would cause cracking and crinkling) a thermoplastic laminate on a packaging material at specified locations to enable welding of the packaging material. The colored markings are optional in Anderson as the entire laminated material is opaque and thus able to generate heat when supplied with radiant energy. None of the problems associated with shrink wrap technology are addressed by Anderson as Anderson is concerned with an entirely different problem. Anderson limits the exposure area of the infrared radiation which converts radiant energy to heat. Appellant has done exactly the opposite. Appellant has increased the area of a transparent shrink wrap film which converts radiant energy to heat energy. This is clearly neither taught nor suggested by Anderson, either alone or in combination with Heilman and/or Amberg.

e. The Combination of Anderson with Heilman Defeats the Objects of Heilman

Heilman desires to heat seal a skirt prior to sealing a cover. Thus, even if the skirt of Heilman were to be made opaque like Anderson's strip and the top unchanged to infrared light, as the Examiner proposes, this would prevent Heilman's top from

being shrunk in the second step. Thus, there is no motivation to combine Anderson with Heiman and Amberg.

f. The Combination of Anderson with Heilman and Amberg Does not Suggest the Claimed Structure

The Examiner argues that "the whole structure of Amberg, et al. does not have to bodily be incorporated with Heilman to make the extending portion of Heilman opaque" (Office Action of May 18, 2004, page 10). However, the Examiner has not shown how one of ordinary skill in the art would incorporate Amberg's skirt into Heilman's top without incorporating the entire structure.

Thus, Appellant respectfully submits that the Examiner has failed to provide any motivation to combine the teachings of the cited art. The Examiner has failed to consider the teaching of the references as a whole, but rather has elected to pick and choose selected portions of the cited art and merely combine the unrelated art using the present disclosure as a motivation to do so.

Accordingly, it is submitted that claim 39, and claim 40 dependent therefrom, distinguish patentable over the combination of Heilman with Amberg and Anderson.

3. Claims 41, 44, and 46 are Patentable over the Combination of Heilman, et al. in View of Amberg, et al. and Applicant's Alleged Admissions

a. The Combination of Amberg with Heilman Does not Suggest the Present Invention

Claim 41 is directed to a roll of heat shrinkable film. The heat shrinkable film is a substrate that contracts when heated and which remains unchanged upon exposure to radiant energy. The film of Heilman does shrink when heated, but there is no suggestion that it should remain unchanged upon exposure to radiant energy. Amberg is not directed to a roll of a heat shrinkable film in the sense of claim 41. The "roll" of thermoplastic material is wound around a mandrel and lapped to define a pull tab **25**. The thermoplastic material is heat shrunk onto the mandrel, after which the center panel **14, 114** is attached. Further, the skirt of Amberg is thermally formed from one material and bonded to a center panel **14**. Thus, the Amberg construction is not a roll of heat shrinkable film, rather a series of individual, stackable, closures.

Even if, as the Examiner suggests, Heilman does teach a film which remains unchanged when exposed to radiant energy, the combination of Amberg with Heilman

does not teach a roll of heat shrinkable film, but rather teaches a three-dimensional structure.

Requiring a three dimensional structure would also destroy the invention of Heilman, which is to allow a film to be used for forming covers. Thus, there is no motivation for the combination of Heilman with Amberg.

Accordingly, Appellant requests that the Board reverses the rejection of claim 41 and claims 44 and 46 dependent therefrom over the combination of Heilman with Amberg, in view of Applicant's alleged admisssions.

4. Claims 42-43 and 45 Are Patentable over the Combination of Heilman with Amberg and Anderson

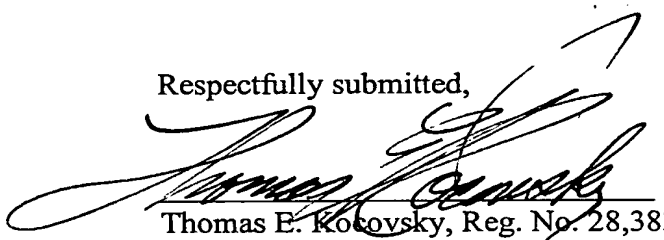
Heilman and Amberg both look to contract the edge or skirt portion of the closure. By contrast, a central focus of the Anderson patent is to avoid heating or irradiating the edge region **5** with infrared radiation. It is with this avoidance of heating and altering the properties of the edge **5** in mind that Anderson suggests putting a dark strip on the aluminum foil or other material of the web to concentrate the heating away from the edge **5**. Because the strip **6** of Anderson is designed and used to avoid heating the edge **5**, it is submitted that Anderson provides no motivation to modify the skirts of Heilman or Amberg to enhance heating and shrinkage or other changes in the physical property of their edge or skirt region.

Accordingly, Appellant requests that the Board reverses the rejection of claims 42-43 and 45 over the combination of Heilman with Amberg and Anderson.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that claims 36-46 distinguish over the cited references and that the other than the obviousness-type double patenting rejections, are in condition for allowance. For all of the above reasons, Appellant respectfully requests this Honorable Board to reverse the rejections of claims 36-46.

Respectfully submitted,



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CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

36. A cover for sealing an open-topped container comprising:

a piece of heat shrinkable film shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container, said piece of heat shrinkable film being a film substrate that contracts when heated and which remains unchanged upon exposure to radiant energy, said downwardly extending portion including a first means to convert the radiant energy to heat to heat said downward depending portion when said first means is exposed to the radiant energy, such that said downwardly extending portion is heat shrunk around said container rim to form a spill resistant cover upon exposure to the radiant energy.

37. The cover of claim 36 wherein said first means comprises adapting said film substrate to absorb energy by imparting opacity to the downwardly extending area.

38. The cover of claim 36 wherein said first means comprises said film having tint, said tint being adapted to absorb radiant energy.

39. The cover of claim 36 wherein said first means comprises a coating on said film said coating being adapted to absorb radiant energy.

40. The cover of claim 39 wherein said radiant energy absorbent coating is printed into said film.

41. A roll of heat shrinkable film for use in a device for forming spill resistant covers on open-topped containers, said roll comprising:

a plurality of severable pieces of heat shrinkable film formed in a continuous web, each piece being shaped and sized to cover the open top of said container and to have a downwardly extending portion around an upper rim of said container wherein said heat shrinkable film is a film substrate that contracts when

heated and which remains unchanged upon exposure to radiant energy, further wherein said downwardly extending portion is adapted to include a first means to absorb the radiant energy to transfer heat to said downwardly extending portion upon said first means being exposed to the radiant energy wherein said downwardly extending portion is heat shrunk onto said container to form a spill resistant cover upon exposure to the radiant energy source.

42. The cover of claim 40 wherein said radiant energy is infrared radiation and said radiant energy absorbing coating is an ink.

43. The cover of claim 36 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb said radiant energy.

44. The roll of heat shrinkable film of claim 41 wherein said first means is a radiant energy absorbent coating material carried by the film substrate said radiant energy absorbent coating material being sufficiently opaque to radiant energy thereby being able to absorb radiant energy.

45. The cover of claim 43 wherein said radiant energy absorbent coating is carried by specific portions of the downwardly extending portion of said film substrate forming a radiant energy absorbing layer at those specific portions, and other portions of said film substrate are free of said radiant energy absorbent coating, and wherein upon said cover being exposed to the radiant energy said portions free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of said radiant energy absorbing coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

46. The roll of heat shrinkable film of claim 44 wherein said radiant energy absorbent coating material is carried by specific portions of the

downwardly extending portion of said film substrate forming a radiant energy absorbent layer at those specific portions, and other portions of said film substrate are free of radiant energy absorbent coating material, and wherein upon said heat-shrinkable film being exposed to a source of radiant energy said portions free of radiant energy absorbent coating material transmit said radiant energy without appreciable warming and said portions carrying said radiant energy absorbent coating material heat sufficiently to cause a shrinkage of radiant energy absorbent coating material carrying portions of the film thereby effecting preferential shrinkage in a predetermined manner.

EVIDENCE APPENDIX

A copy of each of the following items of evidence relied on by the Appellant (and/or the Examiner) is attached:

The following evidence was entered into the record by the Examiner in the Office Action mailed May 18, 2004:

1. Amendment filed February 17, 2004, at page 13, last paragraph, to page 14, second paragraph.

2. Reply brief filed August 2000, page 2, sixth paragraph, beginning "Once again."

3. Supplemental Appeal Brief, filed May 12, 2000, at pages 5 and 6.

RELATED PROCEEDINGS APPENDIX

Copies of relevant decisions in the following related proceedings are attached:

NONE